APPENDIX

SEQ ID NO:1
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SEQ ID NO:2 (cecropin pro)
GCG CCA GAG CCG AAA

SEQ ID NO:3(cecropin pro extended)
GCG CCA GAG CCG AAA TGG AAA GTC TTC AAG

SEQ ID NO:4 (cecropin prepro)
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SEQ ID NO:5 (cecropin prepro extended)
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CTCACCGGCT CCAGATTTAT CAGCAATAAA CCAGCCAGCC GGAAGGGCCG 6900
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AAATAGGGGT TCCGCGCACA TTTCCCCGAA AAGTGCCAC 7689

SEQ ID NO:8 (modified Kozak sequence)
ACCATG

SEQ ID NO:9 (a Kozak sequence)
ACCATGG

SEQ ID NO:10 (a Kozak sequence)
ACCATGT

SEQ ID NO:11 (a Kozak sequence)
AAGATGT

SEQ ID NO:12 (a Kozak sequence)
ACGATGA

SEQ ID NO:13 (a Kozak sequence)
AAGATGG

SEQ ID NO:14 (a Kozak sequence)
GACATGA

SEQ ID NO:15 (a Kozak sequence)
ACCATGA

SEQ ID NO:16 (a Kozak sequence)
ACCATGT

SEQ ID NO:17 (conalbumin polyA)
tctgccattg ctgcttcctc tgcccttcct cgtcactctg aatgtggctt cttcgctact
gccacagcaa gaaataaaat ctcaacatct aaatgggttt cctgaggttt ttcaagagtc
gttaagcaca ttccttcccc agcacccctt gctgcaggcc agtgccaggc accaacttgg
ctactgctgc ccatgagaga aatccagttc aatattttcc aaagcaaaat ggattacata
tgccctagat cctgattaac aggcgtttgt attatctagt gctttcgctt cacccagatt
atcccattgc ctccc

SEQ ID NO:18 (synthetic polyA)
GGCGCCTGGATCCAGATCACTTCTGGCTAATAAAAGATCAGAGCTCTAGAGATCTGTGTGTTGGTTTTT
TGTGGATCTGCTGTGCCTTCTAGTTGCCAGCCATCTGTTGTTTGCCCCTCCCCCGTGCCTTCCTTGACC
CTGGAAGGTGCCACTCCCACTGTCCTTTCCTAATAAAATGAGGAAATTGCATCGCATTGTCTGAGTAGG
TGTCATTCTATTCTGGGGGGTGGGGTGGGGCAGCACAGCAAGGGGGAGGATTGGGAAGACAATAGCAGG
CATGCTGGGGATGCGGTGGGCTCTATGGGTACCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTC
TCTCGGTACCTCTCTC

SEQ ID NO:19 (avian optimized polyA)
ggggatcgc tctagagcga tccgggatct cgggaaaagc gttggtgacc aaaggtgcct
tttatcatca ctttaaaaat aaaaaacaat tactcagtgc ctgttataag cagcaattaa
ttatgattga tgcctacatc acaacaaaaa ctgatttaac aaatggttgg tctgccttag
aaagtatatt tgaacattat cttgattata ttattgataa taataaaaac cttatcccta
tccaagaagt gatgcctatc attggttgga atgaacttga aaaaaattag ccttgaatac
attactggta aggtaaacgc cattgtcagc aaattgatcc aagagaacca a

SEQ ID NO:20
(vitellogenin promoter)
TGAATGTGTT CTTGTGTTAT CAATATAAAT CACAGTTAGT GATGAAGTTG GCTGCAAGCC
TGCATCAGTT CAGCTACTTG GCTGCATTTT GTATTTGGTT CTGTAGGAAA TGCAAAAGGT
TCTAGGCTGA CCTGCACTTC TATCCCTCTT GCCTTACTGC TGAGAATCTC TGCAGGTTTT
AATTGTTCAC ATTTTGCTCC CATTTACTTT GGAAGATAAA ATATTTACAG AATGCTTATG
AAACCTTTGT TCATTTAAAA ATATTCCTGG TCAGCGTGAC CGGAGCTGAA AGAACACATT
GATCCCGTGA TTTCAATAAA TACATATGTT CCATATATTG TTTCTCAGTA GCCTCTTAAA
TCATGTGCGT TGGTGCACAT ATGAATACAT GAATAGCAAA GGTTTATCTG GATTACGCTC
TGGCCTGCAG GAATGGCCAT AAACCAAAGC TGAGGGAAGA GGGAGAGTAT AGTCAATGTA
GATTATACTG ATTGCTGATT GGGTTATTAT CAGCTAGATA ACAACTTGGG TCAGGTGCCA
GGTCAACATA ACCTGGGCAA AACCAGTCTC ATCTGTGGCA GGACCATGTA CCAGCAGCCA
GCCGTGACCC AATCTAGGAA AGCAAGTAGC ACATCAATTT TAAATTTATT GTAAATGCCG
TAGTAGAAGT GTTTTACTGT GATACATTGA AACTTCTGGT CAATCAGAAA AAGGTTTTTT
ATCAGAGATG CCAAGGTATT ATTTGATTTT CTTTATTCGC CGTGAAGAGA ATTTATGATT
GCAAAAAGAG GAGTGTTTAC ATAAACTGAT AAAAAACTTG AGGAATTCAG CAGAAAACAG
CCACGTGTTC CTGAACATTC TTCCATAAAA GTCTCACCAT GCCTGGCAGA GCCCTATTCA
CCTTCGCT

SEQ ID NO:21 (fragment of ovalbumin promoter - chicken)
GAGGTCAGAAT GGTTTCTTTA CTGTTTGTCA ATTCTATTAT TTCAATACAG
AACAATAGCT TCTATAACTG AAATATATTT GCTATTGTAT ATTATGATTG

TCCCTCGAAC CATGAACACT CCTCCAGCTG AATTTCACAA TTCCTCTGTC
ATCTGCCAGG CCATTAAGTT ATTCATGGAA GATCTTTGAG GAACACTGCA
AGTTCATATC ATAAACACAT TTGAAATTGA GTATTGTTTT GCATTGTATG
GAGCTATGTT TTGCTGTATC CTCAGAAAAA AAGTTTGTTA TAAAGCATTC
ACACCCATAA AAAGATAGAT TTAAATATTC CAGCTATAGG AAAGAAAGTG
CGTCTGCTCT TCACTCTAGT CTCAGTTGGC TCCTTCACAT GCATGCTTCT
TTATTTCTCC TATTTTGTCA AGAAAATAAT AGGTCACGTC TTGTTCTCAC
TTATGTCCTG CCTAGCATGG CTCAGATGCA CGTTGTAGAT ACAAGAAGGA
TCAAATGAAA CAGACTTCTG GTCTGTTACT ACAACCATAG TAATAAGCAC
ACTAACTAAT AATTGCTAAT TATGTTTTCC ATCTCTAAGG TTCCCACATT
TTTCTGTTTT CTTAAAGATC CCATTATCTG GTTGTAACTG AAGCTCAATG
GAACATGAGC AATATTTCCC AGTCTTCTCT CCCATCCAAC AGTCCTGATG
GATTAGCAGA ACAGGCAGAA AACACATTGT TACCCAGAAT TAAAAACTAA
TATTTGCTCT CCATTCAATC CAAAATGGAC CTATTGAAAC TAAAATCTAA
CCCAATCCCA TTAAATGATT TCTATGGCGT CAAAGGTCAA ACTTCTGAAG
GGAACCTGTG GGTGGGTCAC AATTCAGGCT ATATATTCCC CAGGGCTCAG

SEQ ID NO:22 (chicken ovalbumin ehancer)
ccgggctgca gaaaaatgcc aggtggacta tgaactcaca tccaaaggag
cttgacctga tacctgattt tcttcaaact ggggaaacaa cacaatccca caaaacagct
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ttgcacagct gtgctgggca gggcaatcca ttgccaccta tcccaggtaa ccttccaact
gcaagaagat tgttgcttac tctctctaga

SEQ ID NO:23 (5′ untranslated region)
GTGGATCAACATACAGCTAGAAAGCTGTATTGCCTTTAGCACTCAAGCTCAAAAGACAACTCAGAGTTC
ACC

SEQ ID NO:24 (putative cap site)
ACATACAGCTAG AAAGCTGTAT TGCCTTTAGC ACTCAAGCTC AAAAGACAAC TCAGAGTTCA

SEQ ID NO:25 (Chicken Ovalbumin Signal Sequence)
ATG GGCTCCATCG GCGCAGCAAG CATGGAATTT TGTTTTGATG TATTCAAGGA GCTCAAAGTC
CACCATGCCA ATGAGAACAT CTTCTACTGC CCCATTGCCA TCATGTCAGC TCTAGCCATG
GTATACCTGG GTGCAAAAGA CAGCACCAGG ACACAGATAA ATAAGGTTGT TCGCTTTGAT
AAACTTCCAG GATTCGGAGA CAGTATTGAA GCTCAGTGTG GCACATCTGT AAACGTTCAC
TCTTCACTTA GAGACATCCT CAACCAAATC ACCAAACCAA ATGATGTTTA TTCGTTCAGC
CTTGCCAGTA GACTTTATGC TGAAGAGAGA TACCCAATCC TGCCAGAATA CTTGCAGTGT
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GCCAGAGAGC TCATCAATTC CTGGGTAGAA AGTCAGACAA ATGGAATTAT CAGAAATGTC
CTTCAGCCAA GCTCCGTGGA TTCTCAAACT GCAATGGTTC TGGTTAATGC CATTGTCTTC
AAAGGACTGT GGGAGAAAAC ATTTAAGGAT GAAGACACAC AAGCAATGCC TTTCAGAGTG
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TCAATGGCTT CTGAGAAAAT GAAGATCCTG GAGCTTCCAT TTGCCAGTGG GACAATGAGC
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GGCATTACTG ACGTGTTTAG CTCTTCAGCC AATCTGTCTG GCATCTCCTC AGCAGAGAGC
CTGAAGATAT CTCAAGCTGT CCATGCAGCA CATGCAGAAA TCAATGAAGC AGGCAGAGAG
GTGGTAGGGT CAGCAGAGGC TGGAGTGGAT GCTGCAAGCG TCTCTGAAGA ATTTAGGGCT
GACCATCCAT TCCTCTTCTG TATCAAGCAC ATCGCAACCA ACGCCGTTCT CTTCTTTGGC
AGATGTGTTT CCCCT

SEQ ID NO:26 (Chicken Ovalbumin Signal Sequence - shortened 50bp)

ATG GGCTCCATCG GCGCAGCAAG CATGGAATTT TGTTTTGATG TATTCAAGGA

SEQ ID NO:27 (Chicken Ovalbumin Signal Sequence - shortened 100bp)
ATG GGCTCCATCG GCGCAGCAAG CATGGAATTT TGTTTTGATG TATTCAAGGA GCTCAAAGTC
CACCATGCCA ATGAGAACAT CTTCTACTGC CCCATTGCCA

SEQ ID NO:28 (vitellogenin targeting sequence)
ATGAGGGGGATCATACTGGCATTAGTGCTCACCCTTGTAGGCAGCCAGAAGTTTGACATTGGT

SEQ ID NO:29 (pro-insulin sequence)
TTTGTGAACCAACACCTGTGCGGCTCACACCTGGTGGAAGCTCTCTACCTAGTGTGCGGGGAACGAGGC
TTCTTCTACACACCCAAGACCCGCCGGGAGGCAGAGGACCTGCAGGTGGGGCAGGTGGAGCTGGGCGGG
GGCCCTGGTGCAGGCAGCCTGCAGCCCTTGGCCCTGGAGGGGTCCCTGCAGAAGCGTGGCATTGTGGAA
CAATGCTGTACCAGCATCTGCTCCCTCTACCAGCTGGAGAACTCTGCAACTAG

SEQ ID NO:30 (p146 protein)
KYKKALKKLAKLL

SEQ ID NO:31 (p146 coding sequence)
AAATACAAAAAAGCACTGAAAAAACTGGCAAAACTGCTG

SEQ ID NO:32 (spacer)
$(GPGG)_x$

SEQ ID NO:33 (spacer)
GPGGGPGGGPGG

SEQ ID NO:34 (spacer)
GGGGSGGGGSGGGGS

SEQ ID NO:35 (spacer)
GGGGSGGGGSGGGGSGGGGS

SEQ ID NO:36 (repeat domain in TAG spacer sequence)
Pro Ala Asp Asp Ala

SEQ ID NO:37 (TAG spacer sequence)
Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala
Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp

SEQ ID NO:38 (gp41 epitope)
Ala Thr Thr Cys Ile Leu Lys Gly Ser Cys Gly Trp Ile Gly Leu Leu

SEQ ID NO:39 (polynucleotide sequence encoding gp41 epitope)

Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Thr Thr Cys Ile Leu Lys Gly
Ser Cys Gly Trp Ile Gly Leu Leu Asp Asp Asp Asp Lys

SEQ ID NO:40 (enterokinase cleavage site)
DDDDK

SEQ ID NO:41 (TAG sequence)
Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala
Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Thr Thr Cys Ile
Leu Lys Gly Ser Cys Gly Trp Ile Gly Leu Leu Asp Asp Asp Asp Lys

SEQ ID NO:42 (altered transposase Hef forward primer)
ATCTCGAGACCATGTGTGAACTTGATATTTTACATGATTCTCTTTACC

SEQ ID NO:43 (altered transposase Her reverse primer)
GATTGATCATTATCATAATTTCCCCAAAGCGTAACC

SEQ ID NO: 44 GnRH:Phor 11
Met-Glu-His-Trp-Ser-Tyr-Gly-Leu-Arg-Pro-Gly-Lys-Phe-Ala-Ile-Cys-Lys-Lys-Phe-Ala-Ile-Cys-OCH

SEQ ID NO: 45 GNRH/Phor14
EHWSYGLRPGKFAKFAKKFAKFAK

SEQ ID NO: 46 Phor14::Beta-LH Sequence
MKFAKFAKKFAKFAKSYAVALSCQCALCRR

SEQ ID NO:47 (pTnMCS (CMV-prepro-HCPro-ProLys-LC-CPA))

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